

Listing of Claims

1. (Currently amended) A fibre-shaping peptide comprising:

(i) a hub and ~~a plurality of~~ two or three peptide monomer units, each of said peptide monomer units being attached at one of its ends ~~end thereof~~ to the hub, wherein the hub is a lysine residue shown at position 17 of SEQ ID NO:3, wherein each peptide monomer unit consists of the amino acids shown at positions 1 – 13 of SEQ ID NO:3, wherein each peptide monomer unit is attached to the hub via a first flexible linker consisting of three poly- β -alanine residues as shown at positions 14-16 of SEQ ID NO:3;

or

(ii) a hub and ~~a plurality of~~ two or three peptide monomer units, each of said peptide monomer units being attached at one of its ends ~~end thereof~~ to the hub, wherein the hub is a glutamic acid residue shown at position 1 of SEQ ID NO:5, wherein each peptide monomer unit consists of the amino acids shown at positions 5-18 of SEQ ID NO:5, wherein each peptide monomer unit is attached to the hub via a first flexible linker consisting of three poly- β -alanine residues as shown at positions 2-4 of SEQ ID NO:5; and

wherein the free ends of at least 2 peptide monomer units are N-termini or C-termini, and wherein each of the at least 2 peptide monomer units is capable of interacting with a sub-unit of a self-assembling peptide to form an overlapping staggered structure.

2-8. (Canceled)

9. (Previously Presented) The fibre-shaping peptide according to claim 1, which additionally comprises one or more functional molecules attached to the hub.

10. (Original) The fibre-shaping peptide according to claim 9, wherein the functional molecule is an antibody molecule, a receptor, a ligand, an enzyme, an antigen, a label, a metal ion or a nucleic acid molecule.

11. (Previously Presented) The fibre-shaping peptide according to claim 9, wherein the functional molecule is attached to the hub via a second flexible linker.

12. (Previously Presented) The fibre-shaping peptide according to claim 11, wherein the second flexible linker is a peptide linker comprising amino acids selected from the group consisting of glycine, alanine, serine and β -alanine.

13. (Previously Presented) The fibre-shaping peptide according to claim 11, wherein the second flexible linker is a poly- β -alanine peptide.

14-36. (Canceled)

37. (Previously Presented) A fibre-shaping peptide comprising:
a hub and ~~a plurality of~~ two or three peptide monomer units, each of said peptide monomer units being attached at one of its ends ~~end thereof~~ to the hub,
wherein the hub is a lysine residue shown at position 17 of SEQ ID NO:3,
wherein each peptide monomer unit consists of the amino acids shown at positions 1 – 13 of SEQ ID NO:3, wherein each peptide monomer unit is attached to the hub via a first flexible linker consisting of three poly- β -alanine residues as shown at positions 14-16 of SEQ ID NO:3;
wherein the free ends of at least 2 peptide monomer units are N-termini or C-termini, and wherein each of the at least 2 peptide monomer units is capable of interacting with a sub-unit of a self-assembling peptide to form an overlapping staggered structure.

38. (Previously Presented) A fibre-shaping peptide comprising:
a hub and ~~a plurality of~~ two or three peptide monomer units, each of said peptide

monomer units being attached at one of its ends ~~end thereof~~ to the hub,

wherein the hub is a glutamic acid residue shown at position 1 of SEQ ID NO:5, wherein each peptide monomer unit consists of the amino acids shown at positions 5-18 of SEQ ID NO:5, wherein each peptide monomer unit is attached to the hub via a first flexible linker consisting of three poly- β -alanine residues as shown at positions 2-4 of SEQ ID NO:5; and

wherein the free ends of at least 2 peptide monomer units are N-termini or C-termini, and wherein each of the at least 2 peptide monomer units is capable of interacting with a sub-unit of a self-assembling peptide to form an overlapping staggered structure.